AURORACORD

16-Channel Digital Multiplexer and Recorder

- **Motion-based compensation for extended recording duration**
- **Museum/event search of recorded video**
- **5 video quality settings range above S-VHS quality**
- **Internal 3.5-in. floppy drive exports video for PC playback**
- **Compatible with AUR2K-KBD keyboard for remote operation**
- **Optional CD-R/W drive for permanent archive of video and audio segments**
- **Compatible with V422-VI Vicoax translator for Vicoax telemetry control**
- **Jog/Shuttle control for frame advance (reverse) playback**
- **Multiple hard drive configurations fit a variety of application requirements**
- **Single audio channel records real-time audio**
- **Compatible with AUR2K-SW switcher for multi-unit control from one remote keyboard**
- **Context sensitive help assists in programming and operation**
- **Digital motion detection automatically increases frame rates, activates alarms and notifies operator**
- **16× digital zoom in live or playback improves identification procedures**
- **Uses reliable AurorA2000 platform for superior performance**
- **8 multiscreen displays**
- **16 alarm inputs**

Vicon's AurorAcorD Digital Recorder is an innovative combination of multiplexer and digital video/audio recorder. The multiplexer portion is based on Vicon's current AurorA2000 and the digital recorder portion replaces the current requirement for system VCRs. Up to 16 channels of video and 1 channel of audio can be recorded to the internal hard drive in a variety of settings for recording rate, sensitivity and quality. There are 16 settings for the system video recording rate in frames per second (fps), 5 settings for video quality and 5 settings for the record sensitivity. This configuration flexibility provides a convenient adjustment between the video quality and extended recording video capability.

ASSOCIATED EQUIPMENT AND ACCESSORIES

AurorAcorD is equipped with all the accessories necessary for connection, mounting and operation. The Accessory kit includes rack mounting brackets/handles, spare fuses, software, termination blocks, line cords, connector assemblies and cable accessories.

Model AUR2K-KBD Remote Keyboard, Product Code 7552: Provides remote operation for AurorA2000 and AurorAcorD units.

Model V422-VI RS-422 to Vicon Translator, Produc Code 7255: Provides conversion of Vicon's NOVA RS-422 protocol to Vicon's Vicoax protocol for Vicoax supported devices.

Model AUR2K-SW AurorA2000/AurorAcorD Video Switcher, Product Code 7737: Provides AurorANet system video switching for AurorA2000 and AurorAcorD units.

Recording Rate, Quality and Sensitivity

AuroAcorD features a programmable system-recording rate that can be set to 1 - 15, and maximum (approximately 25) frames per second (fps) rates. The system-recording rate must be divided among the total number of system cameras to obtain an approximate per camera frame rate. See Table 3 for typical recording times for all AurorAcorD models.

To maximize the total recording-time, a Wavelet compression scheme is used to record and playback the video files. In addition, the audio utilizes a similar codec compression scheme to maximize recording time and limit the effective bandwidth to 6 KHz. The audio is fed into a rear panel audio input jack and a speaker can be connected to the audio output jack. The speaker can be any passive type with 8-ohm impedance. When enabled, AurorAcorD will digitally record the audio in synchronization with the video data.

AurorAcorD can be outfitted with one or two hard drives or one hard drive and one CD-R/W drive. The hard drive stores the motion video with audio in a proprietary format along with alarm, time and titling information for each camera.The hard drive can be setup to stop recording or overwrite itself when the end of the disk is reached. The system will display messages to warn when the hard drive is almost full.

AurorAcorD meets FCC requirements for Class B computing devices and European Community (CE) standard EN 50081-1 (generic emissions) and EN 50082-1 (generic immunity).

Hard Drives/Floppy/CD-R/W

All video is directly recorded to the internal hard drives. Segments of recorded video can be exported from the hard drives to either the floppy drive or the CD-R/W. Video exported to the floppy is single-channel, with no audio in "AVI" format. This

video can be played back using the provided "codec" driver installed on a PC using Windows™ Media Player™. Typically, 2 to 7 minutes of single video segments can be exported to a single 1.44 MB floppy disk.

Video exported to a CD includes all 16 video channels and one audio channel recorded, with alarm information to the hard drive during the segment exported. The CD is recorded in an ISO9660 format and can be played back using an AurorAcorD unit. Depending on activity, typical segments, ranging from 10 to 12 minutes, can be exported to a single 650 MB CD.

All exporting functions, either to the floppy or CD, can be completed while simultaneously recording and viewing live video.

A CD-R type disk can be used for copy without formatting and is recommended by Vicon. However, a CD-R/W disk must be formatted in the AurorAcorD unit and can be quickly erased for reuse.

Serial Communications
Two serial ports are provided that are configurable for RS-232, half duplex/simplex RS-422 and 2-wire RS-485 AurorANet protocol. These ports are used for the support of a host computer, uploading software upgrades, receiver communications, and AurorANet compatible devices.

PTZ Control
AurorAcorD features full telemetry control (PTZ). Using the front panel keys, the AurorAcorD can remotely control up to 16 Vicon camera domes/PTZ drives using RS-422/485 protocol.

Display Options and Performance
AurorAcorD can play back recorded video through a VGA monitor output or a standard digital BNC output. The VGA output provides a horizontal resolution of 720 pixels (540 TVL) and the digital BNC output provides 640 pixels (480 TVL) resolution. A third video output, the spot monitor output, is a non-digital output used to display one camera or a sequence of all system cameras. Sequencing of cameras can be done in any order. In addition, AurorAcorD features two video looping connectors for convenient looping of input video to other devices. Two looping cable assemblies are provided in the accessory kit.

AurorAcorD provides a large variety of multiscreen options for live or playback through the VGA or digital BNC output. These multiscreen options include: picture-in-picture (PIP), quad split, 3 × 3 (9 screen segments), 4 × 4 (16 screen segments), and various combinations of quad- and sixteenth-sized segments. Video may be sequenced in individual video sectors in multiscreen modes. In all of the multiscreen displays, any camera may be assigned to any of the screen segments. There is no fixed partitioning of camera input to screen segment. Also, any screen segment may be made to sequence multiple cameras. If sequencing is selected, the cameras assigned to the sequence may be put in any order, and selected cameras may be sequenced with greater or lesser frequency than other cameras in the sequence.

Each camera channel can be given its own title of up to twelve characters in addition to a time and date display. Additional display information includes an alarm status display that indicates whether the alarm source is a hardwired input, motion detection, receiver alarm, receiver communication fail or video loss. Titling is available on any monitor. Date information may be displayed in the American, European, or Asian formats. AurorAcorD includes an automatic daylight saving feature.

AurorAcorD allows the user to digitally magnify live or recorded images on a linear scane from 1× to 16×. The magnification uses a proprietary interpolation technique which minimizes blocking and pixelation in high-magnification.

NOTE: *Electronic zooming is not the same as optical lens zooming. In photographic zooming, the telephoto setting looks at a smaller part of the original scene and thus can capture more detail than would be seen in a wide-angle view of the scene. In electronic zooming, a segment of a picture of the original object is enlarged. Consequently, only the detail that was in the original picture is enlarged; no additional detail is seen. This is true of all electronic zoom devices.*

Alarms
AurorAcorD offers versatile, multi-faceted alarm functions. There is one hardwired alarm contact for each camera channel (total 16), and each may be used as an alarm input or output. Inputs may be set for normally open (NO) or normally closed (NC) operation, and outputs may be set to active high or low. Alarm inputs may be defined as latching or momentary. Alarms may be acknowledged automatically or manually. Digital video motion detection is provided on each camera channel, and all channels are protected by a video loss alarm feature. Sixteen receiver alarms are available (these alarms are always latching). Alarm outputs include a tone, a special display of the alarmed video, the word ALARM displayed on screen, a front-panel LED for each alarmed channel and dry contact relay outputs (NO and NC).

Motion Detection/Museum Search
AurorAcorD features video motion detection in all display formats. Detected motion on recording video may be used to generate alarms or to increase the overall system-recording rate and quality, or to do both. The video picture area is divided into 192 motion detection blocks. Detection may be enabled or disabled for each block, and each camera channel may be programmed for the minimum number of blocks that must detect motion before the motion detection outputs go active. In addition, the detection sensitivity level may be set on each camera channel over a relative range of 1 to 9.

AurorAcorD features museum search. Museum search is applied to playback video. Motion can be detected at an accelerated playback rate using all the detection block features of motion detection without having to review all video at the recorded rate.

Programming
AurorAcorD is programmed with user-friendly on-screen menus. AurorAcorD's on-screen menus lead the programmer step-by-step through the various programming functions. A very important feature of AurorAcorD's menu system is the ability to set the background to "video" or essentially make it transparent while viewing the display. This feature applies to all 3 monitor outputs and allows the convenience of programming while monitoring video. Another very important feature of the

AurorAcorD design is that all program information is retained during power outages, and when the power outage ends, AurorAcorD resets itself and reloads all the user settings. Thus an AurorAcorD-based system is up and running as soon as power is restored and does not require an operator to restart it. Vicon strongly recommends the use of line conditioners, voltage regulators and uninterruptible power supply (UPS) systems in the electrical power service.

Passcodes
AurorAcorD incorporates optional passcoding that restricts access to the programming screens. The passcode can be set so that it is required to permit modifying the program parameters. The passcode can also be set to limit the ability to change from one display format to another. Furthermore, using the password activation, any video can be locked out from the live display while still being encoded and recorded. This feature gives an administrator the ability to collect video while maintaining the privacy of areas monitored by locked cameras.

In addition, the loss of passcoding can be easily retrieved by a call to Vicon. This clever method requires a simple call to Vicon Tech Support to forward an internal encrypted code in exchange for the lost passcode.

Recording Duration
Recording duration is a very important aspect of any digital recorder. AurorAcorD uses a wavelet compression algorithms to condense video information, thus extending the amount of video that can be recorded.

In addition, AurorAcorD utilizes a "motion-compensation" algorithm that extends the recording even further by comparing reference scenes to new ones. The following charts are for reference. Recording durations vary greatly depending on the level of activity in each scene.

Factors that can affect record duration are motion and contrast in the scene. The following are examples of these factors that can limit normal hard drive storage capacity and record duration:

1. A motion-intense camera scene such as a busy street corner, a
   hotel lobby, a highway, an ocean view, etc.
2. A constantly moving item in a camera scene such as a fan, a monitor, a fish tank, a blinking light, etc.
3. A dark camera scene with the camera's AGC adjustment set too high causing excessive display noise.
4. A camera scene with a large amount of contrasting colors and shades such as a bouquet of flowers.

Model Number	Product Code	Description
AURC-F40	7698	AurorAcorD Digital Recorder with floppy drive and 40 GB hard drive
AURC-F80	7699	AurorAcorD Digital Recorder with floppy drive and 80 GB hard drive
AURC-F120	7700	AurorAcorD Digital Recorder with floppy drive, one 40 GB hard drive and one 80 GB hard drive
AURC-F160	7701	AurorAcorD Digital Recorder with floppy drive and two 80 GB hard drives
AURC-FCD40	7702	AurorAcorD Digital Recorder with floppy drive, CD drive and 40 GB hard drive
AURC-FCD80	7703	AurorAcorD Digital Recorder with floppy drive, CD drive and 80 GB hard drive
AURC-FCD160	8036	AurorAcorD Digital Recorder with floppy drive, CD drive and 160 GB hard drive

Table 1: Models, Product Codes and Descriptions

Image Quality	Sensitivity				
	Lowest	Low	Normal	High	Highest
Lowest (9 Kb)	2	3	4	7	15
Low (12Kb)	3	4	5	10	20
Normal (18Kb)	4	6	7	15	30
High (25Kb)	6	9	10	21	42
Highest (30Kb)	7	10	12	25	50

Notes: *This chart provides a consumption rate in GB/day based on assumptions of 8 hours of noncontinuous scene activity and a frame rate of 15 fps.*
The numbers listed below are a guideline only and can vary greatly based on the amount of activity.
Estimated hard drive usage (GB/day) based on Sensitivity.

Table 2: Estimated HD Usage (GB/Day)

Recording Time		24 Hours			72 Hours			168 Hours (7 Days)			336 Hours (14 Days)			744 Hours (31 Days)		
Image Quality		Lowest	Normal	Highest	Lowest	Normal	Highest	Lowest	Normal	Highest	Lowest	Normal	Highest	Lowest	Normal	Highest
File Size (Kb/f)		9	18	30	9	18	30	9	18	30	9	18	30	9	18	30
Hard Drive	40	Max	Max	16	18	9	5	8	4	2	4	2	1	2	—	—
	80	Max	Max	Max	Max	18	11	15	8	4	8	4	2	3	1	1
	120	Max	Max	Max	Max	Max	16	Max	12	7	11	5	3	5	3	1
	160	Max	Max	Max	Max	Max	Max	Max	15	9	15	7	4	7	3	2

Notes: 1. *"Max" frame rate changes from 18 fps to 24 fps depending on the synchronization of all cameras in the system.*
2. *The above settings are based on "Maximum" Sensitivity Settings and are worst case.*
3. *By changing the Sensitivity settings from "Maximum" to "Normal", you may experience significantly longer recording durations in areas of little or no activity. "Activity" is defined as any motion on the scene.*
Examples of activity are: moving people or animals, moving vehicles, swaying trees, moving or swinging signs, CRT monitor scan.

Table 3: Estimated Number of Days Recording

Contractors' Specification

16-Channel Digital Recorder

The 16 channel digital recorder shall be a combination of multiplexer and digital video/audio recorder. The digital recorder shall replace the current requirement for a multiplexer and a system VCR. Up to 16 channels of video and 1 channel of audio shall be recorded to the internal hard drive in a variety of settings for recording rate, sensitivity and quality. There shall be 16 settings for the system video recording rate in frames per second (fps), 5 settings for video quality and 3 settings for the record sensitivity.

The 16-channel digital recorder shall feature a programmable system-recording rate that can be set to 1 - 18, and maximum (approximately 25) frames per second (fps) rates. The system-recording rate shall be divided among the total number of system cameras to obtain an approximate per camera frame rate. See Table 3 for typical recording times for all digital recorder models. To maximize the total recording-time, a Wavelet compression scheme shall be used to record and playback the video files. In addition, the audio shall utilize a similar codec compression scheme to maximize recording time and limit the effective bandwidth to 6 KHz. The audio shall be fed into a rear panel audio input jack and a speaker shall be connected to the audio output jack. The microphone shall be any powered type. The speaker shall be any passive type with 8-ohm impedance. When enabled, the digital recorder shall digitally record the audio in synchronization with the video data.

The 16-channel digital recorder shall be outfitted with a 3.5-in floppy, one or two hard drives or one hard drive and one CD-R/W drive. The hard drive shall store the motion video with audio in a proprietary format along with alarm, time and titling information for each camera. The digital recorder shall include a menu driven hard drive utility that allows all data to be erased. In addition, the hard drive shall be setup to stop recording or overwrite itself when the end of disk is reached. The system shall display messages to warn when the hard drive is either almost full or has failed. The hard drive data shall either be played back on the recorder or copied to the optional CD-R/W or floppy drive. The video copied to a CD-R/W drive shall also be in a proprietary format, and essentially a mirror image of the selected segment of the hard drive. The CD-R/W disk shall contain the video and audio in addition to the alarm, time and titling information. The CD-RW drive shall allow copies made to a CD-R or CD-R/W type disk. A CD-R type disk shall be used for copy without formatting and is recommended. A CD-R/W disk shall require a one-time format on the AurorAcorD and, once formatted, may be written to or quickly erased for reuse. The data placed on any CD disk shall only be played back on the digital recorder. The motion video copied to the floppy drive shall be in a AVI format, filename CameraXX, where XX = camera 1 - 16. Each file recorded to a floppy shall represent one video channel. This format shall be played back on a PC Pentium-grade computer using the provided wavelet-codec driver installation program and Windows Media Player™.

The 16-channel digital recorder shall be capable of recording all 16 camera inputs, viewing live or playback while simultaneously archiving data without affecting record performance. Electronic pan-tilt-zoom shall offer a 16× zoom ratio with low image blocking. The digital recorder shall accept alarm inputs from a variety of sources, including digital motion detection and hardwired inputs (one per camera channel). Video loss and communication failure alarms shall be available on each camera in the system. Two serial ports shall be provided that are configurable for RS-232, half duplex/simplex RS-422 and proprietary 2-wire RS-485 protocol. These ports shall be used for the support of a host computer, uploading software upgrades, receiver communications, and proprietary RS-485 protocol compatible devices.

The 16-channel digital recorder shall feature full telemetry control (PTZ). Using the front panel keys, the digital recorder shall remotely control up to 16 camera domes/PTZ drives.

The 16-channel digital recorder shall provide a high-resolution output of 720 pixels (540 TVL) for use with a VGA monitor (NTSC only). A BNC connector shall be provided for a high-resolution digital output of 640 pixels (480 TVL). In addition, the 16 channel video inputs shall be looped out using the provided cable assemblies in the accessory kit.

The 16-channel digital recorder shall have a selection of multiscreen displays that include picture-in-picture (PIP), quad split, 3 × 3 (9 screen segments), 4 × 4 (16 screen segments), and various combinations of quad- and sixteenth-sized segments. In all of the multiscreen displays, any camera shall be assigned to any of the screen segments. There shall be no fixed partitioning of camera input to screen segment. Also, any screen segment shall be made to sequence multiple cameras. If sequencing is selected, the cameras assigned to the sequence shall be put in any order, and selected cameras shall be sequenced with greater or lesser frequency than other cameras in the sequence.

The 16-channel digital recorder's electronic zoom feature shall have continuously variable magnification up to 16 times the original size. The magnification shall take place with low blocking or pixellating because the digital recorder shall interpolate data to provide smooth line edges in the image. The expanded picture shall remain bright and sharp. The electronic pan-and-tilt function shall allow the enlarged window to be moved around to any part of the original monitor image.

The 16-channel digital recorder shall dedicate one monitor output (spot monitor) to video that has not been digitized. This analog output shall be used to display one camera continuously or to sequence multiple cameras. If sequencing is selected, the cameras shall be sequenced in any order, allowing the more important cameras to be displayed more frequently. Individual cameras shall be viewed during sequencing for the preset dwell period. The dwell period shall be adjustable from 1 to 60 seconds.

The 16-channel digital recorder shall offer versatile, multi-faceted alarm functions. There shall be one hardwired alarm contact for each camera channel, and each shall be used as an alarm input or output. Inputs shall be set for normally open (NO) or normally closed (NC) operation, and outputs shall be set to active high or low. Alarm inputs shall be defined as latching or momentary. Alarms shall be acknowledged automatically or manually. Digital video motion detection shall be provided on each camera channel, and all channels shall be protected by a video loss alarm feature. Sixteen receiver alarms shall be available (these alarms shall always be latching). Alarm outputs shall include a tone, a special display of the alarmed video, the word ALARM displayed on screen, a front-panel LED for each alarmed channel and dry contact relay outputs (NO and NC).

The 16-channel digital recorder shall feature video motion detection in all display formats. Motion detection shall be used to generate alarms or to increase the overall system-recording rate and quality, or to do both. The video picture area shall be divided into 192 motion detection blocks. Detection shall be enabled or disabled for each block, and each camera channel shall be programmed for the minimum number of blocks that must detect motion before the motion detection outputs go active. In addition, the detection sensitivity level shall be set on each camera channel over a relative range of 1 to 9.

AurorAcorD shall feature Museum search. Museum Search is all motion detection features applied to the playback video. The scanning and detection of motion shall be done at an accelerated playback rate using user-defined blocks.

Each camera channel shall be given its own title of up to twelve characters in addition to a time and date display. Additional display information shall include an alarm status display that indicates whether the alarm source is a hardwired input, motion detection, receiver alarm, receiver communication fail or video loss. Titling shall be available on any monitor. Date information shall be displayed in the American, European, or Asian formats. The digital recorder shall include an automatic daylight saving feature.

The 16-channel digital recorder shall be programmed with user-friendly on-screen menus. The digital recorder's on-screen menus shall lead the programmer step-by-step through the various programming functions. A very important feature of the 16-channel digital recorder shall be the ability to set the background to "video" or essentially make it transparent while viewing the display. Another very important feature of the digital recorder design is that all program information shall be retained during power outages, and when the power outage ends, the Digital Recorder shall reset itself and reload all the user settings. Thus, the Digital Recorder shall be up and running as soon as power is restored and shall not require an operator to restart it. It shall be compatible with an external keypad, RS-422 to coaxial line converter and a system switcher.

The 16-channel digital recorder shall incorporate optional passcoding that restricts access to the programming screens. The passcode shall be set so that it is required to permit modifying the program parameters. The passcode shall also be set to limit the ability to change from one display format to another. Furthermore, using the password activation, any video shall be locked out from the live and playback display while still being encoded and recorded. This feature shall give an Administrator the ability to collect video while maintaining the privacy of areas monitored by locked cameras.

The 16-channel digital recorder shall meet FCC requirements for Class B computing devices and European Community (CE) standard EN 50081-1 (generic emissions) and EN 50082-1 (generic immunity).

The 16-channel digital recorder shall be 17.5 in. (448 mm) wide, 11.5 in. (292 mm) deep and 3.5 in. (89 mm) high. It shall weigh 21.8 lb (9.8 kg). It shall have steel case construction and shall be finished in black color.

The digital recorder shall be Vicon model AurorAcord. See Table 1 for specific model numbers.

ELECTRICAL

Input Voltage: Universal 100-240 VAC, 47-63 Hz.

Current: 600 mA @120 VAC.
350 mA @ 230 VAC.

Power Dissipation: 100 watts nominal.

Heat Equivalent: 5.7 btu/min (1.4 kg-cal/min) maximum. Note: These figures represent the conversion of 100% of the electrical energy to heat. Actual percentage of the heat generated will be less and will vary from product to product. These figures are provided as an aid in determining the extent of cooling required for an installation.

Fuses: 1.25 A, 250 VAC, slo-blo type located in power socket for 120 VAC units.
0.63 A, 250 VAC, slo-blo type located in power socket for 230 VAC units.
6 A, 32 VAC, 3 AG in-line type located inside near the front panel.

Radio Frequency Emission Rating: FCC Class B and EN55022.

RECORDING/PLAYBACK/ARCHIVING

Recording Rate: System rate can be set to 1 - 15 and maximum (approximately 25) frames per second (fps).
Note: The system-recording rate must be divided among the total number of system cameras to obtain an approximate per camera frame rate.

Recording Time: Approximately 7 days of recording onto a 40 GB hard drive with normal quality/sensitivity settings and 12 fps system recording rate with approximately 8 hours per day of activity independent of the number of active camera channels.

Recording Quality: 5 settings: Highest, High, Normal, Low and Lowest.

Recording Sensitivity: 5 settings: Highest, High, Normal, low and lowest.

Recording Capacity: 4 configurations; 40, 80 120 and 160 GB.

Playback Control: JOG/Shuttle front panel concentric knob allows control of video playback speed and direction.

Recording Management: Utility provided to erase data on hard drive.

Playback Capability: 16 channels of recorded video may be played back simultaneously with a single synchronous audio channel.

Archiving Capability: All 16 channels of recorded video, one audio channel and alarm/time/titling information may be archived to the optional internal CD-R/W drive in a proprietary format. The CD-R/CD-R/W disks may only be played back on AurorAcorD. One selected video channel may be exported to the internal floppy disk drive in a AVI format. The floppy disks may be played back on AurorAcorD or on a PC Pentium grade computer utilizing the provided wavelet-codec driver installation program and Windows Media Player.

VIDEO

Video System: NTSC: RS-170, 525 lines, 30 frames/sec.
PAL: 625 lines, 25 frames/sec.

Video Input Signal: Composite video: 1.0 V p-p (140 IRE), consisting of 714 mV (100 IRE) of luminance and 286 mV (40 IRE) of negative-going sync.

Y/C input: 1.0 V p-p Y signal (Y = luminance) plus 400 mV C signal (C = chominance or color) over separate conductors.

Video Output Signal: 1.0 V p-p (140 IRE) composite video, consisting of 714 mV (100 IRE) of luminance and 286 mV (40 IRE) of negative-going sync.

Y/C output: 1.0 V p-p Y signal (Y = luminance) plus 400 mV C signal (C = chominance or color) over separate conductors.

Horizontal Resolution: NTSC VGA: 720 pixels, 540 lines.
BNC: 640 pixels, 480 TV lines.
PAL: 640 pixels, 480 TV lines.

Video Crosstalk: Less than 50 dB at 4.2 MHz.

Video Inputs: 16, terminated with 75 ohms.

Looping Video Outputs: 1 looping output for each camera input using provided cable assemblies.

Monitor Outputs: 2 monitor outputs for digitally processed video, 1 BNC, 1 VGA (for multiscreen displays, video special effects, etc.). 1 monitor output for unprocessed analog video. Provides sequential switching, hold viewing of selected cameras and time, date, titling.

VIDEO FUNCTIONS

Multiscreen Displays: Refer to Figure 1.

Input Channel Distribution: Any video input channel may be assigned to any segment of a multiscreen display.

Multiscreen Sequencing: Any segment or segments of a multiscreen display may be assigned to sequence a series of different input videos. Dwell is user-selectable.

Electronic Zoom: Linear 16 zoom range with interpolation to minimize blocking and pixellation.

Electronic Pan and Tilt: The zoomed area can be moved around to any part of the original full-screen image.

DIGITAL VIDEO MOTION DETECTION

Number of Channels: 16.

Sensing Area: Programmable 16 × 12 block array. Variable sensing area can be as small as 1 block. Programmable sensitivity level.

Active Video Recording: Channels detecting activity may be programmed to record more frequently than channels without activity.

Live Video Display Update: Frequency of update of live video display depends on level of activity in front of camera.

Museum Search: Upon video playback, a programmable search block array may be set and searched for motion at an accelerated rate.

AUDIO

Number of Audio Channels: 1.

Audio Capability: Audio can be enabled to record continuously onto the hard drive as an independent source in synchronization with the multi-channel video.

Audio Input: Rear panel jack requires an external powered microphone input via a 3.5 mm phono type plug and maximum input of 1.5 volts rms.

Audio Output: Front and rear panel jack requires an external speaker or mono headphone output via a 3.5 mm phono type plug of impedance 8 ohms and maximum handling power of 1 watt.

Audio Quality: Speech quality, based on TrueSpeech™ 8.5 compression.

Audio Frequency Response (Input/Output): 200 to 3400 Hz, based on an audio frequency digital sampling rate of approximately 8000 8-bit samples per second

Audio Dynamic Range (Input/Output): 84 dB, based on an audio dynamic range digital sampling rate of approximately 8000 14-bit samples per second.

COMMUNICATIONS

Protocol: RS-232, RS-422 and RS-485 (AurorANet).

Ports: COM1 and/or COM2 configured via menus, jumpers and/or AurorANet termination box.

Control Hardware: Can be remotely controlled via an AUR2K-KBD keyboard, an AurorA2000 multiplexer or another AurorAcorD unit using AurorANet.

Software Upload: Can be uploaded directly with software upgrades via COM1 or COM2 using Microsoft Windows Hyperterminal™.

MECHANICAL PTZ (TELEMETRY) MODE

Functions: Pan.
Left/Right.
Tilt Up/Down.
Pan/Tilt Speed.
Autopan.
Zoom In/Out.
Iris Close/Open.
Autoiris.
Lens Speed.
Focus Far/Near.
Digital Zoom.
Acknowledge Alarm.
Auxiliary Devices On/Off.
Preset Store/Recall.
Freeze/Restore Video.
Help Screen.

Connection: COM1 and/or COM2 configured via menus and jumpers using RS-422 protocol.

Maximum Number of Receivers: 16.

ALARM OPERATION

Number of Hardwired Alarm Inputs: 16. Each of these can be set as an output.

Hardwired Alarm Input Type: Alarm equipment connected to AurorAcorD inputs through the provided DB-37 connector. Should provide voltage-free contact pairs or the equivalent as the output.

Alarm Outputs: 2 dry-contact relay outputs, one normally closed (NC) and one normally open (NO). Relay is rated at 0.5 A at 42 V with a resistive (noninductive) load.

Aux Alarm Output: TTL active high or low.

Alarm Recording Modes:
1. Normal recording continues unchanged.
2. Alternate recording provides increased frequency of alarmed cameras. Non-alarmed cameras continue to be recorded.

Video Loss: Alarm is generated when loss of video is detected.

TITLING

Camera ID: A default camera title with number is displayed unless replaced by a customer-selected title.

Alphanumeric Titling: Each title may have up to 12 alphanumeric characters. Size, color, shadow, and background are selectable.

Screen Display: The screen may display various combinations of title, time/date, mode, status, and various messages.

Recorded Information: Camera title, time, date, plus alarm information are recorded with each image.

MECHANICAL

Dimensions: Refer to Figure 2.
In rack-mount configuration:
Height (H): 3.5 in. (89 mm).
Width (W): 19.0 in. (483 mm).
Depth (D): 11.5 in. (292 mm).
In desk-top configuration:
Height (H): 3.5 in. (89 mm).
Width (W): 20.75 in. (527 mm).
Depth (D): 16.0 in. (406 mm).

Weight: Approximately 20 lb (9.0 kg).

Shipping Dimensions: Height: 7.5 in. (191 mm).
Width: 21.0 in. (533 mm).
Depth: 16.0 in. (406 mm).

Shipping Weight: Approximately 26.5 lb (12.0 kg).

Shipping Volume: 1.4 ft^2 (0.04 m^2).

ENVIRONMENTAL

Operating Temperature Range: 32 to 104° F (0 to 40° C).

Operating Humidity Range: 0 to 90% relative, noncondensing.

Storage Temperature Range: -20 to 140° F (-29 to 60° C).

Storage Humidity: Up to 85% relative, noncondensing.

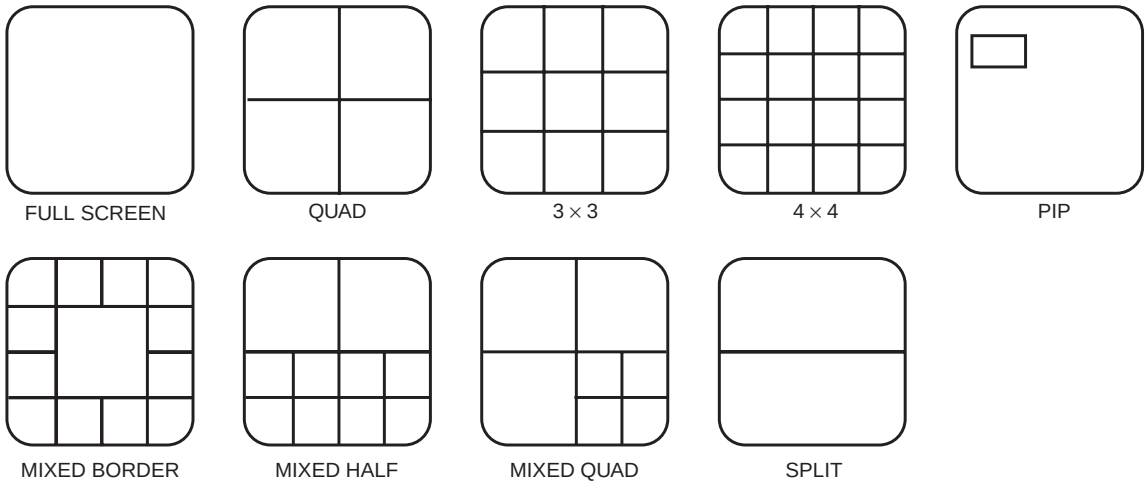

Figure 1: AurorAcorD Displays

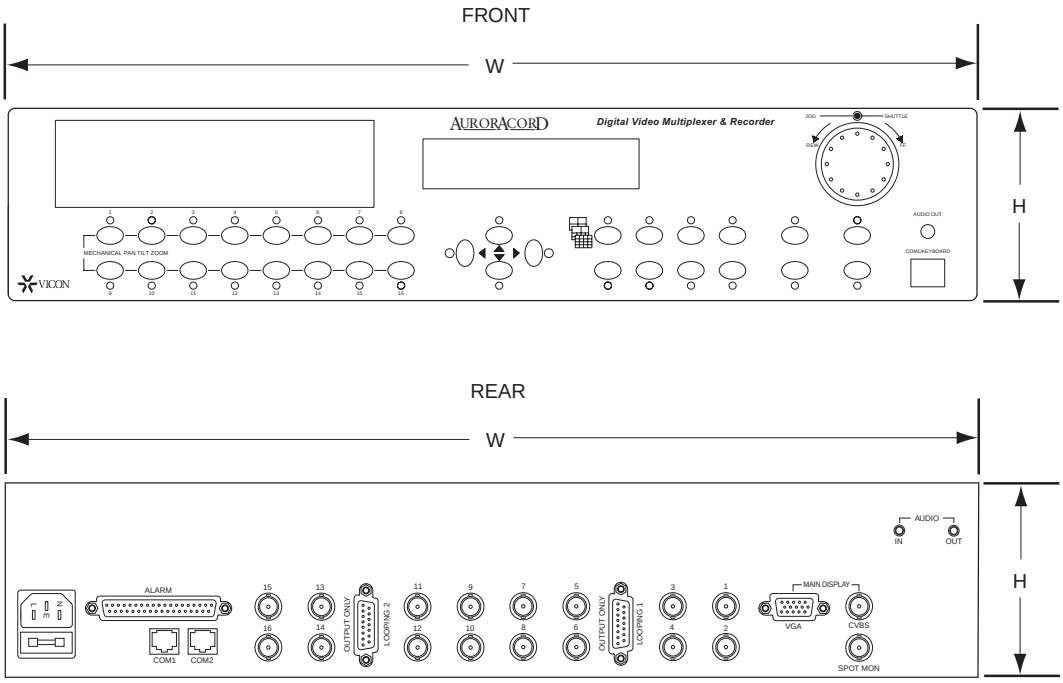

Figure 2: Front and Rear Panel Dimensions

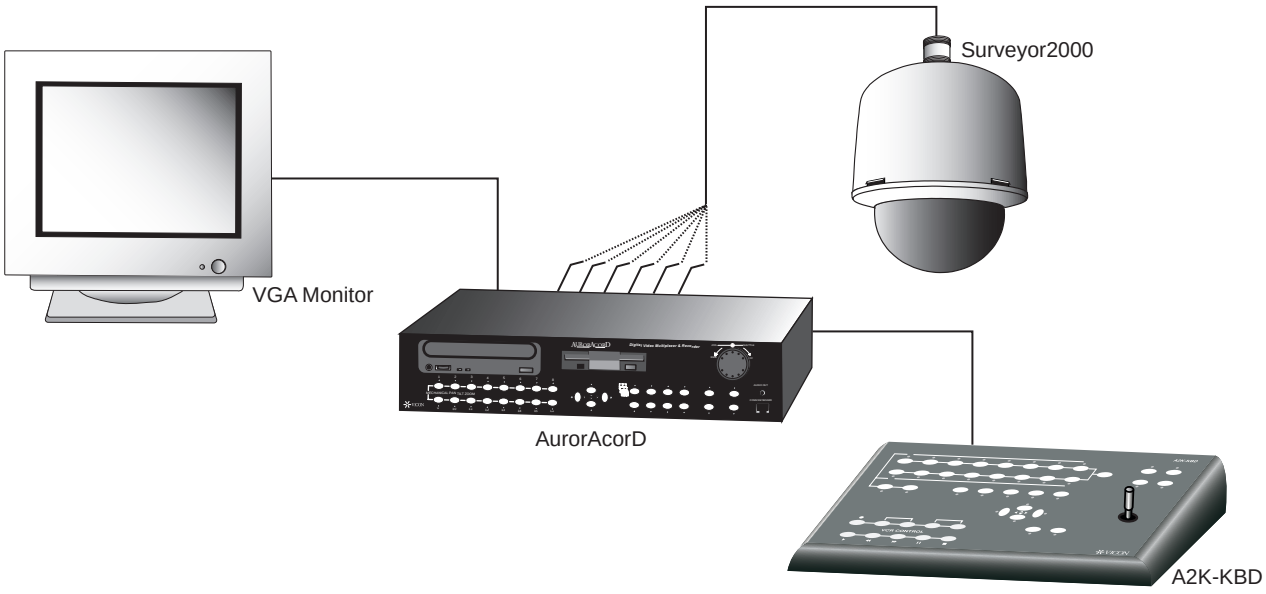

Figure 3: Typical System Diagram

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